

**Descriptions of new North American HYMENOPTERA in  
the collection of the American Entomological Society.**

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Family A P I D Æ.

(Continued from page 136.)

**Calliopsis cinctus.**—♀.—Black; head, thorax and legs clothed with a long griseous pubescence, sparse on vertex, clypeus and disk of thorax; flagellum dull testaceous beneath; wings slightly dusky, second submarginal cell rather shorter than the first, narrowed nearly one-half towards marginal; pubescence on tarsi brownish; abdomen oblong-ovate, depressed, smooth and shining, with a few scattered pale hairs at sides, segments 1—4 each with a pale yellow band, more or less dilated laterally and subemarginate on each side posteriorly, the fifth segment with two pale yellowish spots; anal fimbria fuscous; venter dull piceous, immaculate. Length .40 inch.

♂.—Narrower and more convex, the pubescence on head and thorax whitish; clypeus except black spots at base, labrum, lower sides of face and mandibles except tips, white; tegulæ piceous; anterior tibiæ and tarsi in front, and spot at extreme base and apex of intermediate tibiæ, yellowish; abdomen convex above, segments 1—6 each with a whitish band, narrower than in ♀ and not dilated on the sides, that on sixth segment abbreviated laterally. Length .35 inch.

*Hab.*—Nevada, (Morrison). Two specimens. Allied to *zebratus* Cress.

**Calliopsis zonalis.**—♂.—Black, shining, clothed with an ochraceous pubescence; sides of face, three spots beneath antennæ, clypeus except two black points near base, labrum and mandibles except tips, yellow; antennæ dull testaceous beneath; mesothorax finely punctured, nude on disk; tubercles yellow; tegulæ brown, narrowly margined on inner side with yellow; wings faintly dusky at tips: femora at tips, anterior tibiæ in front, base and apex of four posterior tibiæ, and most of tarsi, yellow; abdomen subdepressed, shining, a narrow yellow band on segments 1—5, more or less narrowed medially and slightly sinuate on the sides, sixth segment with a lateral yellow spot and a short subobsolete yellow line on middle. Length .30 inch.

*Hab.*—California, (H. Edwards). One specimen. Allied to *zebratus* and *cinctus*.

**Calliopsis Edwardsii** Cress.—♀ var. *lateralis* Cress.—A large series of specimens just received, prove this latter to be merely a variety.

**Calliopsis obscurellus.**—♀.—Black, shining, thickly clothed with a rather long, fine, whitish pubescence, that on occiput and thorax above more or less fuscous; a white spot on each lower corner of the face; mandibles castaneous at tips; flagellum fulvous beneath; tegulæ piceous; wings hyaline, faintly dusky at tips, marginal cell long, broad, obliquely pointed at tip, second

submarginal shorter than the first, narrowed nearly one-half towards marginal, receiving the recurrent nervures about one-fifth from the base and tip respectively; legs with griseous pubescence; abdomen ovate, depressed, shining, thinly pubescent, segments 1—4 each with a narrow dull whitish band before apex, narrowed medially and obliquely emarginate on each side posteriorly; apex fimbriated with pale pubescence. Length .35—.40 inch.

♂.—More convex than ♀; sides of face, clypeus, labrum and base of mandibles white; the four anterior tibiæ and tarsi more or less yellowish in front; the whitish fasciæ on abdomen narrower than in ♀, and sometimes interrupted on the sides. Length .30—.35 inch.

*Hab.*—California, (H. Edwards). Six specimens.

***Perdita zonalis.***—♀.—Shining; head and thorax dark metallic green, thinly clothed with a white pubescence; sides of face, spot beneath antennæ, clypeus, except sometimes a minute dot on each side, labrum, base of mandibles, scape, flagellum beneath, collar, two spots on prothorax, tubercles and tegulæ, lemon-yellow; wings hyaline, beautifully iridescent, stigma subhyaline, marginal cell much shorter than first submarginal, broadly truncate at tip, second submarginal less than half the length of first, narrowed one-half to marginal; legs lemon-yellow, anterior femora behind, a line on four anterior tibiæ behind, and the posterior tibiæ and tarsi entirely, black; abdomen flat, polished, lemon-yellow, a dot on each side of first segment and a broad band on apex of segments, 1—4, black; apical segment pale honey-yellow, clothed with long sparse pale pubescence; venter immaculate. Length .25 inch.

*Hab.*—Nevada, (Morrison). Ten specimens. Allied to *zebrata* Cress.

***Nomada vinnula.***—♀.—Black, opaque, head and thorax very densely and confluent punctured; sides of face broadly, spot beneath antennæ, posterior orbits, clypeus except two black spots at base, labrum, mandibles except tips, scape beneath, line on prothorax above, tubercles, tegulæ, scutellum, large square mark on sides of pleura and two spots on metathorax behind, all lemon-yellow; flagellum fulvous, more or less spotted behind with black, second joint much longer than third; wings rather broadly dusky at tips and in marginal cell; legs lemon-yellow, coxæ, trochanters and femora behind, also stripe on tibiæ behind, black; abdomen convex, subopaque, very finely and densely punctured, black, segments 1—5 each with a broad lemon-yellow band, that on second segment dilated laterally; venter yellow, with narrow black bands. Length .50 inch.

♂.—Much like the ♀, with the head and thorax thickly clothed with pale pubescence, ornamented the same except that the posterior orbits are yellow only beneath the eyes, the yellow mark on sides of pleura much smaller and that on scutellum often divided into two spots. Length .40—.45 inch.

*Hab.*—Nevada, (Morrison). Ten specimens.

***Nomada jocularis.***—♀.—Black, opaque; head and thorax densely punctured, thinly clothed with a pale pubescence; sides of face, clypeus, spot above, posterior orbits, labrum, mandibles except tips, scape in front, line on prothorax, line over tegulæ or spot in front, tegulæ except a central dot, tubercles, large mark on sides of pleura deeply notched behind, scutellum,

line behind, and two spots on metathorax, all yellow; upper anterior orbits and flagellum ferruginous, second and third joints of the latter about equal in length; scutellum subbilobate; wings dusky, stained with yellowish, apical margins darker; legs yellow, coxæ and trochanters behind, base of femora and behind more or less and spot or line on tibiæ behind, black, tarsi pale ferruginous; abdomen very minutely punctured, shining, yellow, the three basal segments above black, each with a broad yellow submedian band, narrowed in the middle, that on the first segment sometimes varied with ferruginous on the disk; apical margin of terminal segments rufo-testaceous. Length .43 inch.

*Hab.*—Nevada, (Morrison). Two specimens.

**Nomada verecunda.**—♀.—Small, black, rather closely punctured; sides of face broadly, posterior orbits, clypeus except two spots at base, labrum, mandibles except tips, scape in front, line on prothorax above, tegulæ, tubercles, mark beneath tubercles confluent or nearly so with a smaller one behind, scutellum, sometimes a line on postscutellum, and spot in front of each intermediate coxa, lemon-yellow; flagellum black above, testaceous beneath, second joint longer than third; scutellum flattened; wings dusky at tips; legs black, tips of coxæ and femora, four anterior tibiæ except spot behind, base and apex of posterior tibiæ and all the tarsi, lemon-yellow; abdomen shining, segments 2—5 each with a broad continuous lemon-yellow band, those on two and three dilated laterally, second segment with a narrow band of same color slightly emarginate on each side posteriorly, apex with silvery pile; venter with three broad yellow bands. Length .30—.35 inch.

♂.—Much like the ♀; face with a silvery pile, and not so broadly yellow at the sides, and the cheeks immaculate except beneath the eyes; flagellum shorter, with close set joints; the yellow spots on pleura reduced or entirely wanting; the yellow band on first segment of abdomen broader and not emarginate posteriorly. Length .30—.35 inch.

*Hab.*—Nevada, (Morrison). Numerous specimens. This pretty little species may be easily recognized by the black annulus on posterior tibiæ and immaculate metathorax.

**Nomada suda.**—♀.—Black; thorax coarsely and confluent punctured; sides of face, orbits interrupted at summit of eyes, clypeus, except short black line and dot on each side, spot above, labrum, mandibles except tips, scape beneath, line on prothorax above, tegulæ, dot in front, tubercles, large mark on sides of pleura, two spots beneath, scutellum and two broad wavy stripes on metathorax, all yellow; face shining; flagellum ferruginous, second joint a little shorter than the third; wings faintly dusky, dark on apical margin; legs yellow, coxæ beneath and the femora above and beneath more or less, black, abdomen yellow, base of first and narrow apical margin of segments 1—4 black or brown; venter yellow, sometimes black on posterior middle of the segments. Length .30 inch.

*Hab.*—Nevada, (Morrison). Two specimens.

**Phileremus? productus.**—♀.—Black, coarsely and confluent punctured, clothed with a short coarse whitish pubescence, dense on face, cheeks and sides of thorax; antennæ short, stout, black; scutellum large, flattened, with an erect subacute spine at tip; tegulæ rufo-piceous; wings stained with

fuscous, marginal cell long, sublanceolate, obtusely pointed at tip, second submarginal nearly as long as the first, truncate at tip and narrowed one-half towards marginal, receiving the first recurrent at the base and the second one-third from the tip; legs slender, simple, tarsi fuscous; abdomen elongate convex, rapidly narrowed to tip, segments 1—5 each with an apical fringe of short dense white pubescence, terminal segment flat, produced, broadly rounded at tip; venter subconvex, ornamented as above. Length .35 inch.

*Hab.*—Nevada, (Morrison). One specimen.

***Melecta pacifica*** Cress.—♀ variety *fulvida*.—Black, the pubescence on scape above and a tuft on vertex, yellow; the occiput, thorax above and band on first segment of abdomen above, clothed with a dense rich fulvo-ferruginous pubescence; abdomen with a slight bluish iridescence in certain lights. Length .50 inch.

*Hab.*—Nevada, (Morrison). Six specimens. A very handsome insect.

***Melecta separata***.—♀.—Deep black, clothed with black pubescence; tuft about base of antennæ, occiput, thorax above, except black band between the wings, and a band on first segment of abdomen above, clothed with a pale ochraceous pubescence; wings slightly dusky; abdomen with a slight bluish iridescence. Length .50 inch.

*Hab.*—Nevada, (Morrison). One specimen. Resembles *pacifica*, but is rather more robust, and readily distinguished by the black band between the wings.

***Melecta maculata***.—♀.—Small, black; head above antennæ, cheeks, spots on thorax above, large patch on sides of pleura, apical middle of scutellum and sides of metathorax, clothed with a short dense cinereous pubescence, that on head above and mesothorax anteriorly often varied with spots of black or brown pubescence; flagellum robust; disk of mesothorax and of the scutellum, which is bilobate, nude and confluent punctured; thorax broad, gibbous; tegulæ dull fulvous; wings with the apical margin broadly dusky, streaked with hyaline, the marginal cell and a cuneiform spot across the second and third submarginal cells fuliginous; legs black, with long sparse hairs, the tibiæ more or less clothed with a dense cinereous pubescence; abdomen broad ovate, depressed, opaque; a broad band of short dense appressed cinereous pubescence on segments 1—4, that on the first straight on anterior margin and sinuate posteriorly, those on three following segments more or less narrowed and sinuate on anterior margin and each enclosing on the posterior margin four black spots; fifth segment with two large cinereous spots; venter piceous, shining. Length .35 inch.

♂.—Like the ♀ in ornamentation; the flagellum very much thickened and fusiform. Length .30 inch.

*Hab.*—Nevada, (Morrison). Four specimens. The arrangement of the patches of pubescence on this curious little species is extremely difficult to describe. The form of the flagellum of the ♂ is unlike that of any other species of *Apidæ* known to me, being dilated and fusiform.

**Melecta? mucida.**—♂.—Small, black; head and thorax densely clothed with a rather long cinereous pubescence, that on sides of face, occiput and anterior margin of mesothorax, varied with fuscous; scape pubescent, flagellum nude, robust, filiform; disk of thorax and scutellum almost nude, the latter strongly bilobate, and on each side a tuft of short black pubescence; tegulæ testaceous; wings hyaline, broadly fuliginous at apex, a dusky spot in second submarginal cell, also one in the third discoidal cell, the transverse nervure dividing the second and third submarginal cells is absent in both wings, thus making the second submarginal as long as the marginal and receiving both recurrent nervures, the second in the middle; tibiæ and base of tarsi more or less clothed with cinereous pubescence; abdomen convex above, covered with a short dense appressed cinereous pubescence. Length .33 inch.

*Hab.*—Nevada, (Morrison). One specimen.

**Stelis interrupta.**—♀.—Small, black; the face, sides of thorax and legs clothed with cinereous pubescence, that on the head and thorax above black and sparse; tegulæ piceous, wings hyaline, dusky on apical margin; abdomen short, convex, almost globose, shining, segments 1—5 each with a narrow whitish band on the middle, all interrupted medially and more or less so on each side; venter nude, immaculate. Length .22 inch.

*Hab.*—Nevada, (Morrison). One specimen.

**Heriades? rotundiceps.**—♀.—Black, strongly and rather closely punctured; head broad, almost as large as the thorax, long and prominent behind the eyes and ocelli, face and cheeks clothed with white pubescence, that on the vertex thin and pale fuscous; clypeus truncate in front, mandibles with a patch of short dense yellowish pubescence near tips; thorax clothed with white pubescence, that on scutellum long, and that on mesothorax short and sparse; wings hyaline, marginal cell long, lanceolate, pointed at tip, second submarginal cell a little shorter than the first, narrowed about one-half towards marginal, receiving the first recurrent nervure about one-fourth from the base and the second near the tip; legs clothed with pale pubescence; abdomen convex, about as long as head and thorax taken together, a fringe of short dense white pubescence at apex of the segments; ventral scopa white or very pale ochraceous. Length .27—.30 inch.

*Hab.*—Nevada, (Morrison); Oregon, (Edwards). Ten specimens.

**Heriades? cubiceps.**—♀.—Black, head and thorax strongly punctured, sides of face and thorax clothed with whitish pubescence; head very large, quadrate, larger than thorax, full and prominent behind the eyes; middle of clypeus smooth and polished, apical margin deeply emarginate and crenulated; mandibles large and pubescent above; cheeks unarmed; wings clear; legs slender; abdomen small, convex, shining, feebly punctured, the segments narrowly fringed at apex with short white pubescence; ventral scopa white. Length .30—.35 inch.

*Hab.*—Nevada, (Morrison). Four specimens.

**Anthidium emarginatum** Say.—♂ variety *atripes*.—Legs entirely black; the white bands on abdomen more deeply emarginate and interrupted, the fifth segment with only two dots, the two apical segments entirely black. Length .45 inch.

*Hab.*—Nevada, (Morrison). One specimen.

**Anthidium californicum.**—♂.—Black, clothed with white pubescence, sometimes tinged with ochraceous, that on vertex and thorax above more or less dull yellow; sides of face, clypeus, mandibles except tips, and spot behind summit of each eye yellowish-white; wings tinged with fuscous, venuration as in *emarginatum*; legs clothed with white pubescence, a pale yellow line on outer side of the basal joint of all the tarsi; abdomen shaped as in *emarginatum*, a spot on each side of first segment and sometimes two spots or dots on middle, a band on segments 2—5, more or less broadly and deeply emarginate on each side anteriorly, and interrupted medially, and two spots on middle of sixth segment, all yellowish; a stout acute spine on lateral apical margin of sixth segment; apical segment prominently bilobed at tip, and with a rather long, acute, incurved, central tooth. Length .50 inch.

*Hab.*—California, (H. Edwards). Two specimens. Closely allied to *emarginatum* Say.

Specimens will doubtless occur with the pale bands on abdomen divided by the emarginations into spots of very unequal size, and which may all disappear except those on the extreme sides of the segments, where they do not seem to diminish in size.

**Anthidium placitum.**—♀.—Black, clothed with short ochraceous pubescence, that on vertex and mesothorax fuscous; head and thorax closely and finely punctured; sides of face, clypeus except a median stripe, mandibles except tips, a band behind ocelli interrupted medially, lateral margin of mesothorax curved anteriorly, two oblique lines on scutellum, tubercles, and anterior margin of teguæ, all yellow; wings dusky, venuration as in *emarginatum*; legs yellow, most of coxæ and trochanters, femora above and within and most of the tibiæ within, black, tips of tarsi fuscous; abdomen short, broad, convex, shining, feebly punctured, deeply transversely impressed at base, each segment with a yellow band, those on two or three basal segments slightly interrupted medially, that on first segment slightly notched on each side posteriorly, those on segments 2—5 more or less deeply sinuate or sub-emarginate on each side anteriorly; ventral scopa pale. Length .40 inch.

*Hab.*—Nevada, (Morrison). One specimen.

**Anthidium blanditum.**—♀.—Black, clothed with pale pubescence; sides of face, clypeus, mandibles except tips, band behind ocelli interrupted medially, lateral margin of mesothorax curved anteriorly, two oblique lines on scutellum, anterior margin of tegulæ, tubercles, and spot beneath, yellow; wings dusky, venuration as in *emarginatum*; legs yellow, coxæ, trochanters, femora above and beneath, and tibiæ within, black, tips of tarsi ferruginous; abdomen convex, finely punctured, not transversely impressed at base, segments 1—5 with an even yellow band, slightly narrowed medially and interrupted on first segment; terminal segment entirely yellow, the apical margin slightly notched medially and strongly sinuate on each side; ventral scopa pale. Length .40 inch.

*Hab.*—Nevada, (Morrison). Two specimens.

**Anthidium illustre.**—♀.—Black, opaque, densely and finely punctured, clothed with short pale ochraceous pubescence, that on vertex and mesothorax pale fuscous; sides of face broadly and continued nearly to summit, a

narrow band on occiput confluent with broad posterior orbits, clypeus except broad median stripe, mandibles except tips, lateral margin of mesothorax curved inwards anteriorly, broad posterior margin of scutellum, slightly interrupted medially, spot on tegulæ, tubercles and spot beneath, all lemon-yellow; clypeus margined anteriorly; wings tinged with fuscous, a dark streak in marginal cell, second submarginal as long as the first, receiving the recurrent nervure at extreme base and tip; legs lemon-yellow, coxæ, femora and tibiæ within more or less black, tips of tarsi ferruginous; abdomen convex, shining, segments 1—5 each with a rather broad even lemon-yellow band, slightly interrupted on middle, sixth segment yellow with a black spot on each side of the middle, which is depressed, the apical margin deeply and obtusely emarginate in the middle and on each side, the lateral angles acute, making the margin quadridentate; ventral scopa ochraceous. Length .50—.60 inch.

♀ var. **consonum**.—Mandibles and femora mostly, black; sixth dorsal segment of the abdomen yellow, with a rather broad median black stripe. Length .50 inch.

*Hab.*—Nevada, (Morrison). Three specimens. A very handsome species.

**Anthidium conspicuum**.—♀.—Black, opaque, densely punctured, clothed with pale ochraceous pubescence, that on vertex and mesothorax pale fuscous; sides of face, attenuated above, sides of clypeus, a narrow band on occiput, interrupted medially and continued nearly half way down the posterior orbits, anterior margin of tegulæ, spot before, a smaller one beneath and four spots on posterior margin of scutellum, all lemon-yellow; wings much as in *illustre* except that the second submarginal cell receives the first recurrent nervure a small distance from the base; legs black, tibiæ above and base of tarsi, yellow, tips of tarsi fuscous; abdomen convex, finely punctured and opaque at tip of segments, shining and slightly transversely impressed at base; segments 1—5 each with a lemon-yellow band, more or less interrupted medially, that on fifth segment broadest, those on first and second notched on each side posteriorly; sixth segment depressed on each side of middle, yellow with a broad median black stripe, apical margin as in *illustre*; ventral scopa ochraceous. Length .55 inch.

*Hab.*—Nevada, (Morrison). One specimen.

**Anthidium singulare**.—♀.—Black, opaque, densely punctured; broad anterior orbits, clypeus except central black dot, spot above, dot before anterior ocellus, narrow line on occiput confluent with line on posterior orbits, mandibles except tips, spot on lateral anterior margin of mesothorax, spot on scale-like tubercles, large spot on sides of pleura, posterior margin of scutellum, and outer margin of tegulæ, all yellow; wings stained with fuliginous, second submarginal cell receiving the first recurrent nervure near base, the second recurrent passing a little beyond the tip; legs black, the knees, stripe on femora beneath, their tibiæ above and base of tarsi, yellow, posterior coxæ each with a long yellow spine; abdomen convex, shining, sparsely punctured, extreme sides of segments 2—4 dilated posteriorly into a prominent obtuse tooth, a large yellow spot on sides of segments 1—3, a spot on middle of one, a bilobed spot on middle of two, and two spots nearly confluent on middle of three, the fourth and fifth segments each with a broad apical yellow band, indented on the middle anteriorly and enclosing on each side a black

spot; sixth segment yellow, its apical margin, which is truncate, and stripe down the middle black; ventral scopa ochraceous. Length .55 inch.

*Hab.*—Nevada, (Morrison). One specimen. Easily recognized by the dilated lateral margin of abdominal segments 2—4.

**Anthidium pudicum.**—♂.—Small, black, head and thorax thinly clothed with pale pubescence; sides of face, clypeus, spot above, dot behind summit of eyes, mandibles except tips, two small spots on anterior margin of mesothorax, broad margin of tegulæ and spot on large scale in front, all white; thorax finely punctured, the scutellum has sometimes a narrow curved whitish line interrupted medially; wings smoky at tips, second recurrent nervure passing beyond the apex of the second submarginal cell; knees, line on four anterior tibiæ and basal joint of tarsi, and spot at base and apex of posterior tibiæ, white; posterior coxæ with a stout white spine; abdomen convex, strongly punctured, shining, incurved at tip, a white spot on each side of first segment and a line on the middle; segments 2—5 each with a white band, narrowed and slightly interrupted in the middle and more or less deeply emarginate on each side posteriorly, giving the band a bisinuate appearance; terminal segment broadly white at tip, the apical margin trilobate, the lateral lobes broad and rounded. Length .30 inch.

*Hab.*—Nevada, (Morrison). Two specimens. This is allied to *parvum* Cress.

**Anthidium pudens.**—♀.—Small, black; head and thorax very densely punctured; spot on each side of face, short line behind the summit of eye, two dots on anterior margin of mesothorax, two narrow lines on scutellum, spot on tegulæ and spot on scale in front, white; wings dusky, especially in marginal cell and at apex, second recurrent nervure passing beyond the apex of second submarginal cell; legs with short griseous pubescence, a white spot at base of all the tibiæ; abdomen shining, sparsely punctured, a spot on each side of first segment and a line on middle, four equidistant spots, arranged in a transverse line, on segments 2—4, and two spots on middle of fifth segment all white; ventral scopa pale yellow. Length .30 inch.

*Hab.*—Nevada, (Morrison). Two specimens. This may prove to be the ♀ of *pudicum*.

**Megachile carbonaria.**—♀.—Rather narrow, feebly punctured, shining, black, the pubescence, which is sparse on disk of thorax and abdomen, black; wings dusky on apical margin; abdomen subconvex, clothed with a short erect black pubescence, sparse on the disk, more dense at sides and on basal segment, no fringe on apical margin of the segments; ventral scopa black. Length .50 inch.

*Hab.*—Nevada, (Morrison). Two specimens.

**Megachile subnigra.**—♀.—Black, clothed with black pubescence, that on thorax above, a tuft beneath tegulæ, first segment of abdomen and lateral apical margin of second segment, whitish; head and thorax rather closely punctured; disk of thorax almost nude; wings clear; legs shining the pubescence black; abdomen short, shining; ventral scopa black. Length .45 inch.

♂.—Form parallel; the pubescence on head, thorax, anterior femora beneath, and base of abdomen long, dense and whitish, that on the face very



dense and white, that on sides of pleura mixed with black; last joint of antennæ dilated and flattened; anterior tibiæ yellow at tip, their tarsi whitish, not much dilated, and fringed beneath with white pubescence, tipped with black, the basal joint grooved on upper edge, the coxæ toothed, the four posterior legs clothed with black pubescence, that on middle tarsi beneath long and mixed with whitish; abdomen shining, clothed with black pubescence, that on sides of first segment, and narrow apical margin of segments 2—4 white, sixth segment acute at tip, the sides crenulated. Length .36 inch.

*Hab.*—Nevada, (Morrison). Two specimens.

**Megachile legalis.**—♂.—Black, opaque, subparallel, clothed with a dense white pubescence, most dense on face, sides of thorax, scutellum and anterior legs beneath; tegulæ dull testaceous; wings clear; anterior femora and tibiæ beneath and their tarsi yellow, the latter slightly dilated, anterior coxæ with two strong spines, four posterior legs thickened, but simple; abdomen with parallel sides, rather strongly punctured, sides of first segment and narrow apical margin of segments 1—5, clothed with whitish pubescence, sixth segment obtusely pointed at tip, faintly crenulated, and produced or prominently carinate on each side beneath. Length .40—.45 inch.

*Hab.*—Nevada, (Morrison). Three specimens.

**Megachile nevadensis.**—♀.—Black; head and thorax densely and confluent punctured, clothed with a short, dense ochraceous pubescence, sometimes more or less tinged with yellow or pale fulvous, that on vertex and mesothorax sparse and strongly mixed with black; wings dusky on apical margin; abdomen shining, clothed with sparse black pubescence, the first segment especially at sides and the apical margin and sides of segments 2—5 densely clothed with a yellow or ochraceous pubescence, apical segment pale sericeous; ventral scopa ochraceous, more or less black at extreme tip. Length .45—.55 inch.

♂.—Form parallel, the pubescence longer, much more dense and generally strongly tinged with fulvous, that on vertex and thorax not mixed with black, that on the face very dense and golden; last joint of antennæ dilated and flattened; anterior femora yellowish above, fringed at base beneath with long white pubescence, their tarsi whitish, not much dilated, grooved above at base and fringed beneath with white pubescence edged with black, their coxæ toothed; middle femora swollen, their tarsi beneath with a long fringe of white pubescence; posterior legs incrassate, their coxæ and femora with long white pubescence, their tarsi with thickened joints and pubescent beneath; abdomen convex, with subparallel sides, the basal segments clothed with short dense erect ochraceous, yellow or fulvous pubescence, that on the apical segments more or less mixed with black, the apical margin of the segments with a short dense fringe of ochraceous pubescence; apical margin of sixth segment with numerous very unequal teeth; the tip beneath with a central spine. Length .45—.55 inch.

*Hab.*—Nevada, (Morrison). Numerous specimens.

**Melissodes nevadensis.**—♂.—Black; head, thorax, legs and base of abdomen clothed with a long dense pale ochraceous pubescence; clypeus entirely and labrum yellowish-white; antennæ reaching back to tip of second abdominal segment, entirely black, third joint as long as first and second

together, the fourth as long as the first three taken together; wings faintly tinged with fuscous; legs slender, simple; abdomen above clothed with black pubescence, that on the two basal segments and sometimes the apex more or less, pale; venter with pale pubescence. Length .50—.55 inch.

*Hab.*—Nevada, (Morrison). Numerous specimens. This is allied to *Edwardsii* Cress.

**Melissodes acerba.**—♀.—Black; face, cheeks, thorax and base of abdomen clothed with a dense pale ochraceous pubescence; wings clear, slightly dusky at tips; legs with black pubescence, that on femora beneath more or less pale; abdomen with short black pubescence, that on first segment pale, apical margin of fourth segment, and sometimes the lateral apical margin of the third, with a band of appressed white pubescence, sometimes both are obsolete; occasionally the lateral apical margin of the fifth segment is whitish. Length .50 inch.

*Hab.*—Nevada, (Morrison). Seven specimens.

**Anthophora carbonaria.**—♀.—Broad, robust, black, clothed with a deep black pubescence, that on clypeus more or less, labrum, posterior tibiæ and base of tarsi outwardly, pale ochraceous; wings faintly dusky at tips; abdomen shining, thinly pubescent, apical segment with a pale ochraceous pile. Length .60 inch.

*Hab.*—Nevada, (Morrison). Two specimens.

**Anthophora pernigra.**—♀.—Small, black, clothed with black pubescence, that on each side of scutellum slightly mixed with pale; wings dusky at tips; abdomen shining, sparsely pubescent, the fifth segment above and beneath clothed with a fulvous pubescence. Length .45 inch.

*Hab.*—Nevada, (Morrison). One specimen.

**Anthophora iguava.**—♀.—Broad, robust, black; head and thorax clothed with a dense cinereous pubescence, that on vertex and mesothorax more or less strongly mixed with black, so that sometimes the mesothorax appears sooty; third joint of antennæ very long and slender, dilated only at tip; wings slightly dusky; legs with black pubescence, that on anterior femora beneath and on posterior tibiæ and base of tarsi outwardly, cinereous; abdomen shining, segments one and two, lateral apical margins of 3—5 and sides of venter clothed with cinereous or whitish pubescence. Length .55—.60 inch.

*Hab.*—Nevada, (Morrison). Eight specimens. This may prove to be the ♀ of *pacifica* Cress.

**Anthophora maculifrons.**—♀.—Form small, compact, head broader than thorax, black; head, thorax and legs clothed with a dense cinereous pubescence, sparse on vertex and disk of thorax; spot on middle of face beneath antennæ, broad anterior margin of clypeus, sometimes a narrow stripe down the middle, labrum and mandibles except tips, yellowish-white; tegulæ dull testaceous; wings hyaline; tips of tarsi pale ferruginous, apex of first joint of posterior pair with a comb-like tuft or feather of black pubescence; base of abdomen thinly clothed with white pubescence, the first

segment narrowly and the remaining segments broadly clothed at apex with a very short dense appressed cinereous pile; a patch of short dense yellowish pubescence on apical middle of fifth segment; venter piceous, apical margin of segments dull testaceous. Length .40 inch.

♂.—The pubescence of thorax above sometimes tinged with fulvous: face narrower than ♀ and eyes larger, scape yellowish in front; four anterior tarsi long and slender, nearly twice the length of the tibiæ, posterior legs incrassate; abdomen smaller than in ♀ and more acuminate, apical segment bidentate and fulvous at tip, with a blunt tooth on each side at base. Length .30—.35 inch.

*Hab.*—Nevada, (Morrison). Twelve specimens. In some specimens the abdomen above is almost entirely covered with the cinereous pile. This and the next two species are allied to *albata* Cress.

**Anthophora flexipes.**—♀.—Small, same form as *maculifrons*, and very much like it in ornamentation; a whitish stripe connects the broad band on apex of clypeus with the spot on middle of face; the pile on segments 1—4 of abdomen above is of a pale cinereous color, while the two apical segments are entirely black; otherwise there appears to be little or no difference. Length .40 inch.

♂.—Eyes larger; face narrower and clothed, as also the tibiæ, with a dense silvery-white pubescence; scape white in front, flagellum fulvous beneath; tips of the four anterior femora and their tibiæ and tarsi mostly honey-yellow; anterior tibiæ fringed behind with long pale hairs, their tarsi nearly twice as long as the tibiæ, slender, the first joint curved and dilated at tip, blue-black beneath and fringed with long black and white hairs, second joint short, black, remaining joints longer, yellow, the apical spurs and claws black; intermediate tibiæ short, dilated and covered with a dense white pile, their tarsi extremely long and slender, being nearly four times the length of the tibiæ, the first joint as long as the tibiæ, twisted flattened and fringed behind with short black hair, remaining joints shorter, equal in length and sub-filiform, the single spur at tip of the tibiæ long and very acute; posterior legs incrassate, their tibiæ covered with a dense white pile, their tarsi a little longer than the tibiæ, the first joint as long as the remaining joints taken together, black, narrow at base, then suddenly dilated and then narrowed to tip, and fringed behind with long black hair; abdomen much as in the ♀, but smaller, with the two apical segments black, apex bidentate. Length .35 inch.

*Hab.*—Nevada, (Morrison). Eight specimens. The tarsal structure of the ♂ of this little species is exceedingly curious, all three sets being differently formed.

**Anthophora exigua.**—♀.—Form of the two preceding species, but much smaller; black, clothed with a cinereous pubescence; thorax above with short sparse black pubescence; transverse mark on middle of face, broad anterior margin of clypeus, labrum except upper corners, and base of mandibles, white; vertex and occiput with a few black hairs; tegulæ piceous, margined with testaceous; wings hyaline; legs robust, densely clothed with cinereous pubescence, the four posterior legs with black pubescence on under side, basal joint of posterior tarsi broad, with an apical comb-like tuft of

black pubescence as in *maculifrons*; abdomen convex, entirely covered above with cinereous pile, extreme apex black; venter piceous, shining. Length .30 inch.

♂.—Closely resembles the ♀, the face narrower and more pubescent, the eyes larger, the scape whitish in front, the thorax not clothed with black above, the legs more slender, the tarsi longer, more slender, but simple, and the abdomen smaller and narrower. Length .25 inch.

*Hab.*—Nevada, (Morrison). Eight specimens.

***Anthophora sodalis.***—♂.—Black; head, thorax and base of abdomen clothed with a rather long, dense ochraceous pubescence, that on thorax and base of abdomen above strongly tinged with ferruginous; sides of face, clypeus, line above, labrum, dot on base of mandibles and spot on scape in front, white; wings faintly dusky on apical margins; legs thickened, especially the posterior pair, and simple, except basal joint of posterior tarsi which is broad, flat and having a stout subacute tooth within near the base, posterior femora subfusiform; abdomen with the two basal segments above clothed with a short fulvo-ferruginous pubescence, that on remaining segments short and black, mixed with pale on apical margin of the third; terminal segment bidentate; venter with a patch of long pale pubescence near apex. Length .55 inch.

*Hab.*—Nevada, (Morrison). One specimen.

***Anthophora centriformis.***—♂.—Black; head, thorax, legs and basal segment clothed with a dense cinereous pubescence, that on thorax above tinged with ochraceous; sides of face, clypeus, transverse mark above, labrum except a piceous spot on each side, base of mandibles and scape in front, white; third joint of antennæ slender, dilated at tip; wings hyaline; legs thickened, especially the posterior pair, basal joint of posterior tarsi broad, flat, dilated on inner edge near tip, the other tarsi simple; abdomen narrowed to apex, shining, with a very short sparse black pubescence on second and remaining segments, more or less mixed with pale on the lateral apical margins; terminal segment obtuse, with a patch of white pubescence on each side; venter with cinereous pubescence on middle of the segments. Length .55 inch.

*Hab.*—Nevada, (Morrison). One specimen. This has much the form and general appearance of certain species of the genus *Centris*.

***Xylocopa arizonensis.***—♀.—Shining black, with a strong dark or steel-blue reflection; cheeks, thorax except disk above, and the legs, clothed with black pubescence; head opaque, deeply punctured, densely so on face; the two posterior ocelli sunken, carinate in front; face depressed about base of antennæ, with a short tubercle in front of anterior ocellus; labrum emarginate at tip; thorax deeply punctured, smooth and shining on disk of mesothorax and base of scutellum; wings violaceous-black; abdomen sparsely punctured, sides of ventral segments fringed with black pubescence. Length 1 inch.

♂.—Shorter and more robust than ♀, the blue color rather more brilliant, the pubescence more dense, that on mesothorax anteriorly, sides of pleura and on basal segment of abdomen more or less pale; face much narrower, eyes larger and labrum not emarginate at tip. Length .85 inch.

*Hab.*—Arizona, (H. Edwards). Two specimens.

**Xylocopa subvirescens.**—♀.—Head black tinged with blue, and with a slight tinge of green on middle of face, clothed with white pubescence, which is rather dense on cheeks and occiput, thin and slightly mixed with black on the face; antennæ slender, castaneous, flagellum black above; thorax blue laterally, beneath and posteriorly, clothed with whitish pubescence, mesothorax and scutellum submetallic olive-green, changing to purple on the disk, clothed with a yellowish pubescence, wanting on the smooth, impunctured disk; tegulæ fulvo-testaceous; wings yellowish-hyaline, nervures honey-yellow; legs more or less varied with shades of brown, clothed with whitish or pale ochraceous pubescence, that on tarsi beneath rufo-fuscous; abdomen strongly tinged with green, clothed with an appressed pale pubescence, yellowish on basal segments and more dense and white on apical margin of the segments, a narrow smooth line down the middle of the segments, which has sometimes a purplish tinge; anal fimbria blackish, tipped with ferruginous; venter blue-green, clothed with white pubescence, that on two apical segments black. Length .55 inch.

♂.—The green color on thorax and abdomen more brilliant, the pubescence more decidedly yellow and more dense; sides of face, clypeus, spot above, labrum, spot or line on mandibles, scape beneath, and sometimes the basal joints of flagellum beneath, dull yellowish; sometimes there are two black spots on clypeus towards base; cheeks with long white pubescence; otherwise very much like the ♀, except the narrower face and larger eyes. Length .50—.55 inch.

*Hab.*—Mexico, (Sumichrast). Four specimens.

**Centris montezuma.**—♀.—Black; head and thorax with short, dense ochraceous pubescence, paler on cheeks and thorax beneath, that on head, thorax above and on sides tipped with black; clypeus concave, a prominence on each side at base, the apical margin slightly recurved, sharp and truncate; sides of face narrowly, an interrupted band on clypeus, labrum except base, and mandibles except tips, yellow; flagellum testaceous beneath; wings dark fuscous, paler on apical margins; legs with pale pubescence, that on the four posterior tibiæ and tarsi fulvous, long and dense on posterior pair, that on base of intermediate tarsi short fuscous and fringed behind with fulvous; abdomen fulvous, shining, first segment stained at base with brown, and thinly clothed with a pale pubescence more or less tipped with black, that on apical segments fulvous. Length .80 inch.

♂.—The yellow band on clypeus broad and entire; posterior femora very much swollen, their tibiæ rather more robust than in ♀ and fringed behind with fulvous pubescence, as is also the basal joint of their tarsi; abdomen narrower and more convex and more thickly pubescent at base and apex. Length .70 inch.

*Hab.*—Mexico, (Sumichrast). Two specimens.

**Centris totonaca.**—♀.—Small, black; head and thorax thickly clothed with a whitish pubescence, that on vertex black, and that on thorax above ochraceous; clypeus prominent, depressed medially, two confluent spots on anterior margin, labrum and mandibles except tips yellow; flagellum dull testaceous beneath; tegulæ fulvous; wings hyaline; legs brown, the two posterior pair more or less varied with fulvous, posterior femora slender, their tibiæ with long yellow pubescence, that on their tarsi black; abdomen fulvous,

with yellowish pubescence at tip, basal segment blackish, thinly clothed with pale pubescence. Length .40 inch.

*Hab.*—Mexico, (Sumichrast). One specimen. This is allied to *fulviventris* Cress.

**Centris otomita.**—♂.—Small, black; head clothed above with black pubescence, that between antennæ and on cheeks dense and white; clypeus, labrum, mandibles except tips and spot at tip of scape beneath, yellowish-white; thorax clothed with a dense fulvo-ochraceous pubescence above, that beneath nearly white; tegulæ fulvous; wings hyaline; legs brown, varied with black, clothed with white pubescence, posterior femora swollen, their tibiæ and base of tarsi fringed behind with long black pubescence, basal joint of their tarsi with a sharp spine on middle of posterior edge; abdomen shining black, the basal, two or three apical, and the ventral segments clothed with pale ochraceous pubescence. Length .40 inch.

*Hab.*—Mexico, (Sumichrast). One specimen.

**Apathus? californicus.**—♂.—Black; head clothed with yellow pubescence, more or less mixed with black on occiput and cheeks; face long, the clypeus convex, smooth, shining and almost nude, space between the eyes and base of mandibles very broad and polished; thorax densely clothed with yellow pubescence in front of the tegulæ, elsewhere it is black, sometimes the scutellum is more or less mixed with yellow, and occasionally the pubescence of the thorax is entirely yellow except a black band between the wings; wings fusco-hyaline, clearer towards base; legs with short black pubescence, sometimes more or less mixed with yellow; the pubescence of the abdomen is generally black, with that on segments four and five yellow; sometimes the apical margin of segments 1—3 are yellow, and in one specimen the pubescence of the abdomen is entirely yellow except that on middle of segments two and three, and on apical segment. Length .55—.65 inch.

*Hab.*—California, (H. Edwards). Twelve specimens. This species has the same form as that of *elatus* Fabr., having the face long as in *Bombus*, and the clypeus prominent and sparsely pubescent, in which respect they differ from all the other species of the genus known to me.

**Panurgus nevadensis.**—♂.—Piceous, clothed with long fulvous-yellow pubescence, rather dense on face, cheeks, thorax and legs; face broad; clypeus except two black points, and a triangular spot on each side on lower angle of face, yellow; tips of mandibles castaneous; flagellum fulvous beneath; wings hyaline, dusky at tips, nervures and stigma brown, neuration as in *andrenoides*; legs brown-black, slender, clothed with long pale pubescence; abdomen polished, thinly clothed with pale pubescence, more dense at apex, lateral apical margins of the segments with a fringe of short pale pubescence, more obvious in certain lights. Length .30 inch.

*Hab.*—Nevada, (Morrison). Eight specimens. This is closely allied to *andrenoides* Cress.